

OLED Collaboration

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Background

- OLED Association has organized annual visits to Washington, D.C. for the last 3 years to lobby on behalf of the OLED lighting industry with the goals of:
 - Demonstrating commitment of the industry to DOE leadership in support of solid state lighting
 - Educating lawmakers of the benefits and future of OLEDs
 - Cultivating the OMB to ensure requests for OLED funding were received positively
- In July, we visited to Washington to Lobby for Continued DOE Funding of the OLED Industry
 - Acuity Brands
 - Moser Baer Technologies
 - Next Generation Lighting Alliance
 - Trovato Manufacturing
 - EMD Chemicals (Merck)
 - OLEDWorks
 - PPG Industries
 - Universal Display Corporation

July Visits

- House Energy and Commerce Committee
- House Energy and Water Appropriations Committee
- Dr. David Danielson, Assistant Secretary for Energy Efficiency & Renewable Energy & James Brodrick SSL Program Manager
- Senate Energy and Water Appropriations Committee
- Office of Management & Budget

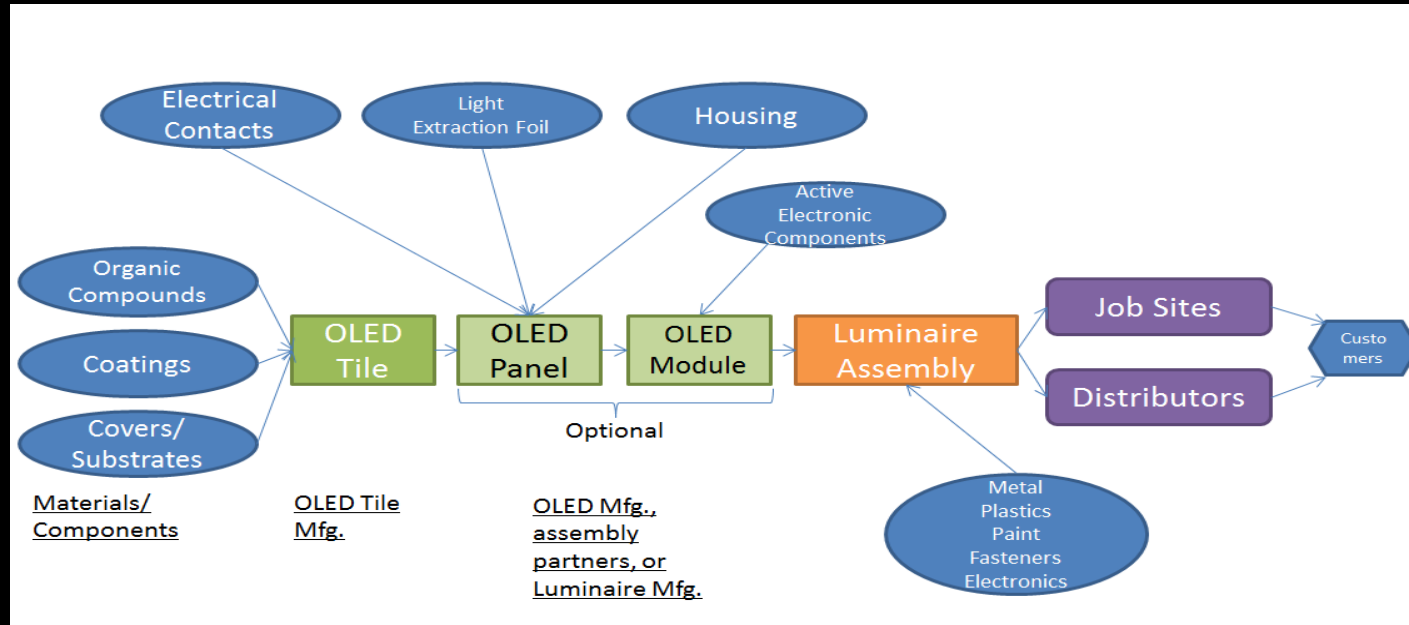
Questions Raised by Dr. Danielson

- How are OLEDs and LEDs different and complementary – because of their use in different applications (OLEDs being more personal lighting) – they should not be simply compared by lm/W and \$/klm without considering usage models
- How will OLEDs change the energy consumption equation over the long term? Can OLEDs save energy?
- What should be the DOE OLED Lighting R&D and education focus not currently covered by OLED display companies?
- Does the industry have bold prediction of impact of these added DOE funds to move the needle on market adoption/wider scale commercialization and US jobs creation?
- What impact is the DOE having on the OLED industry?
- Provide a chart to show how US companies from visit fit in the OLED supply chain
- How much is US industry currently spending on OLED R&D?

US participation-- all levels of OLED supply chain

R&D Expenditures

- US\$ 24M by adhoc members
- ~\$50M total



OLED Materials & Components	OLED Equipment Manufacturing	OLED Tile, Panel, Module Mfg	OLED Luminaire Manufacturing
<ul style="list-style-type: none"> • UDC • PPG • EMD Millipore • Corning • Guardian • Alcoa • Plextronics • Cambrios • DuPont • 3M • Ferro • DOW 	<ul style="list-style-type: none"> • Trovato Mfg. • Veeco • Colnatec • nTact • Kateeva • Kurt Lesker • LC Technologies • Mbraun USA • KLA Tencor • Photo Research • LabSphere • Keithly • Filmetrics • JA Woollam 	<ul style="list-style-type: none"> • OLED Works • Moser Baer 	<ul style="list-style-type: none"> • Acuity Brands • Philips Lighting • GE Lighting • WAC Lighting • Cooper Lighting • Osram Sylvania • Lite Control • Armstrong • Innosys

DOE OLED Lighting Focus

- Higher efficiency and lower cost outcoupling
- Create and promote market acceptance and awareness for OLED lighting
- Provide access to DOE Corporate Partners
- Encourage accelerated adoption of OLED lighting by creating an analog to the successful LED L-Prize completion for OLEDs.
- Promote the creation of a production OLED lighting facility in the U.S.
- However, we need a more complete and inclusive support group with a broader scope to:
 - Develop an industry-wide set of R&D and Manufacturing goals
 - Demonstrate the commitment to OLED lighting
 - Accelerate the efforts to solve the challenges inhibiting high volume mass production of OLED lighting
 - Provide comprehensive manufacturing support in the interim

Coalition – Strawman Program

- Concept – OLED Lighting Panels ready for Market Adoption (Acuity Brands)
 - Standard Panel
 - Physical & Electrical Interconnect
 - Performance Minimums
 - Support from DOE
 - Commitment from Lighting Suppliers to minimum purchase levels
- Cost Model
 - Define current costs
 - Tradeoffs between performance and cost
 - Programs must show change in performance or cost or both
- Test Bed for New Technology

Next Steps announced in Rochester

- Arrange Meeting with Dr. Danielson, probably scheduled to occur within 6-8 weeks
 - Reemphasize the importance of the program
 - Provide more details on a pilot program and the mass production phases
 - Show an increased level of industry support

Dr. Danielson elected not to take the meeting, need to reschedule

- **What I need from you:**
 - Join the OLED Coalition
 - Provide inputs on your view of the program
 - Provide your interest in establishing a permanent DOE OLED Support group

NGLIA and the OLED Association are collaborating
on a program to establish the

OLED Coalition

